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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,743	04/02/2004	Massimo Padoan	38882/GM/cd	1541
7590 01/25/2006 MODIANO & ASSOCIATI Via Meravigli, 16 MILANO, 20123 ITALY			EXAMINER GLASS, ERICK DAVID	
			ART UNIT 2837	PAPER NUMBER

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/815,743	Applicant(s) PADOAN, MASSIMO	
	Examiner Erick Glass	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2005.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-14 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 04/02/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>04022004</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

Claim 1 is objected to because of the following informalities: Claim 1 recites, "reduce the corresponding lead time error to as close as possible to zero." This wording is indefinite, either the error goes to zero or the error is simply reduced. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Claims 1, 2, 3, 6, 8, 9, 11, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Welch (US 5,568,026).

With respect to claim 1, Welch discloses a synchronization device for at least two windshield wipers, where each wiper has a blade and is connected to an electric motor that oscillates each blade between two preset positions (Fig. 1a); a means for activating and deactivating the motor (Fig. 1b, #16 sends DMD and DB 1); a means for signaling the transit and direction of each blade through a preset reference position (Fig. 1b, input to #s 22 and 23), a means for controlling the signals and driving the activation means (Fig. 1b, #16; col. 3, lines 35-38), a means for determining, at each wipe, the wiping time for each of said wipers, a means for measuring, at each wipe, the lead time error of a faster wiper, a means for calculating, at each wipe, a correction time, where the correction time reduces the lead error, and said correction time is a function of the corresponding lead error, a means for identifying, at each wipe, the slower wiper, and a means for applying, at each wipe, each one of said correction times to said

corresponding motor/gearmotor of each one of said at least one faster wiper which interrupt/reduce power of the corresponding motor/gearmotor and reduce the corresponding lead time error to as close as possible to zero (Fig. 1b, #16 has does all of the functions; col. 5, 11. 14-37; cols.6/7, lines 40-67/1-22).

With respect to claim 2, Welch discloses the means for controlling the activation/deactivation means, the means for determining wiping time, the means for measuring lead error, the means for calculating the correction time, and the means for identifying the slower wiper are integrated in a single system (Fig. 1b, represents a single system).

With respect to claim 3, Welch discloses each means for applying the correction time is connected to a communication bus, which is connected to a remote control system (Fig. 1b, #24 is remote from #16).

With respect to claim 6, Welch discloses the means for applying correction times comprise the activation/deactivation means (Fig. 1, #16 performs both functions).

With respect to claim 8, Welch discloses the means for signaling the transit and direction comprise an automatic parking switch that emits a synchronization signal (cols. 1/2, lines 64-67/1-4).

With respect to claim 9, Welch discloses the means for applying the correction time comprises a switch that removes power from the motor (Fig. 1b, DBS 1 and DBS2 ground the motor winding, which effectively removes power; see col. 2, lines 28-36).

With respect to claim 11, Welch discloses the motor is a two-speed type (Fig. 1b, #24 controls motor puts motor in HI or LO speeds, respectively).

With respect to claim 14, Welch discloses a synchronization device for at least two windshield wipers, where each wiper has a blade and is connected to an electric motor that oscillates each blade between two preset positions (Fig. 1a); a means for activating and deactivating the motor (Fig. 1b, #16 sends DMD and DB 1); a means for signaling the transit and direction of each blade through a preset reference position (Fig. 1b, input to #s 22 and 23), a means for controlling the signals and driving the activation means (Fig. 1b, #16; col. 3, lines 35-38), a means for determining, at each wipe, the wiping time for each of said wipers, a means for measuring, at each wipe, the lead time error of a faster wiper, a means for calculating, at each wipe, a correction time, where the correction time reduces the lead error, and said correction time is a function of the corresponding lead error, a means for identifying, at each wipe, the slower wiper, and a means for applying, at each wipe, each one of said correction times to said corresponding motor/gearmotor to reduce said lead time error (Fig. 1b, #16 has does all of the functions; col. 5, 11. 14-37; cols.6/7, lines 40-67/1-22).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Welch as applied to claims 1 and 3 above, and further in view of Braun et al. (US 6,218,741).

Welch does not disclose the limitations of claims 4 and 5.

Braun et al. discloses a windshield wiper system that uses a radio link to control a control unit (Fig. 1, #14 controls #10). The motivation to use a radio to control a controller is so an operator can easily change specifications or parameters based on system requirements (col. 2, 11. 63-67).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to implement a radio link to control the microprocessor of Welch, which means that the radio link would control the means for applying the correction time, the means for controlling the activation/deactivation means, the means for determining the wiping time, the means for identifying the slower wiper, and the means for measuring the lead time error. The motivation to implement a radio link into the system of Welch is so an operator can easily change the specifications or parameters from, for example, the cabin of an automobile, as taught by Braun et al.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Welch as applied to claim 1 above, and further in view of Kuhbauch (US 5,157,314).

Welch does not disclose the limitations of claim 7.

Kuhbauch discloses using proximity switches to determine the position of the wiper at various points as it moves across the windshield. The motivation to use proximity switches is because they can be arranged in the windshield border, at the edge of the windshield, or in the body of the vehicle (col. 6, 11. 44-55). This provides the advantage of allowing flexibility in design choice.

Therefore, it would have been obvious to one having ordinary skill in the art at the time, of the invention to use proximity switches to supply the wiper position signals to the microcomputer in the device of Welch, thereby providing the advantage of allowing flexibility in design choice, as taught by Kuhbauch.

Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Welch as applied to claim I above, and further in view of Hayden (US 5,630,009).

Welch does not disclose the limitations of claims 10 and 12.

With respect to claim 10, Hayden discloses the means for activating/deactivating the motor comprises two switches in parallel, where one of the parallel configurations reduces the power supply to the motor (Fig. 3, #230 has a contact, which is interpreted as two switches in parallel; contact reduces the power supply to zero in the OFF position), and the other parallel configuration selects the rotation rate (Fig. 3, #104 controls the rate - either HI or LO). The motivation to use two switches in parallel is to prevent motor stalling, overheating, and burnout (abstract).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to replace each of the switching devices of Welch (Fig. 1b, R1 and M), with two switches in parallel, thereby providing the advantage preventing motor stalling, overheating, and burnout, as taught by Hayden.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Welch as applied to claim 1 above, and further in view of Ishikawa et al. (4,742,280).

Welch does not disclose the limitations of claim 13.

Ishikawa et al. disclose the means for activating/deactivating comprising two switches (Fig. 2, #103 and #102). The switches are configured in series, the first switch 102 activating and deactivating the motor (col. 3, lines 23-55) and the second switch 103 controlling the motor speed. The motivation to implement the switches in series as described above is so the user can control both the speed and direction of the motor.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to implement switches in series into the Welch device, thereby providing the advantage of allowing a user to control both the speed of the motor/wipers and the direction of rotation, as taught by Ishikawa et al.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Glass whose telephone number is 571-272-8395. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EG



DAVID MARTIN
SUPERVISOR, EXAMINER
TECHNOLOGY CENTER